

Applicants traverse the rejection of claims 1-37 as follows.

II. Claim Rejections -- 35 U.S.C. § 103(a)

Claim 1 recites the feature of "said piezo-electric device being provided with a cavity connecting to an inside of said liquid container and said cavity contacting said liquid" (*see also* claims 14 and 19). The Examiner acknowledges that neither Hara nor Hasegawa teaches or suggests this recited feature. However, the Examiner alleges that either of Lichte or Walker makes up for this acknowledged deficiency. In particular, the Examiner relies on Fig. 4a of Lichte and Fig. 7 of Walker.

Fig. 4a of Lichte illustrates a container 300 having an extended well 310 to which a transducer 110 is attached via an adapter 320. However, the extended well 310 is part of the container 300 and not part of the transducer 110 (Lichte: col. 13, lines 37-45). Indeed, the need for an adapter 320 to connect the transducer 110 to the extended well 310 further illustrates that the extended well 310 is not part of the transducer 110. Thus, Lichte fails to teach or suggest that the transducer 110 itself has a cavity contacting any liquid.

Fig. 7 of Walker illustrates a housing 32 forming an ink reservoir 24, wherein the housing 32 has a pair of openings 54. A label 46 wrapped around the housing 32 includes a pair of sensors 42, each sensor 42 overlapping an opening 54 (Walker: Fig. 7). A linking device 44 receives a conductivity signal between the pair of sensors (electrodes) 42, which is indicative of ink within an absorbent material 34 (in the ink reservoir 24) between the openings 54 (Walker: Fig. 7). However, the openings 54 are formed in the housing 32 and are not part of any piezoelectric device. Thus, Walker fails to teach or suggest that the sensors 42 themselves have

RESPONSE UNDER 37 C.F.R. § 1.116
U.S. Application No. 09/881,662
Attorney Docket No. Q64982

a cavity contacting any liquid. Indeed, the sensors (electrodes) 42 themselves are not even piezoelectric devices.

Applicants respectfully submit that it may assist the Examiner's understanding to compare the through hole 1c (*i.e.*, opening in the container body 1) and the cavity 161 of the piezoelectric device (*i.e.*, actuator 106) of Applicants' Figs. 16A and 16B.

For at least the exemplary reasons set forth above, claims 1, 14, and 19 are patentable under § 103(a) over any combination of Hara and Hasegawa, and further in view of Lichte or Walker. Consequently, claims 2-13, 15-18, and 20-37 are patentable at least by virtue of their dependency.¹

III. Formal Matters

A. Information Disclosure Statements

Applicants thank the Examiner for providing signed and initialed copies of the Forms PTO/SB/08 submitted with Applicants' Information Disclosure Statements filed on October 15, 2002 and October 25, 2002, thereby indicating consideration of the references cited therein.

Additionally, Applicants respectfully request that the Examiner acknowledge Applicants' Proprietary Information Disclosure Statement filed on January 13, 2003.

B. Drawings

The Examiner fails to acknowledge receipt of and indicate approval of the proposed drawing correction (for Fig. 12) that Applicants filed on April 3, 2002. Accordingly, Applicants

¹ Applicants note that the Examiner fails to specifically address the features recited in dependent claims 2-13, 15-18 and 20-37 in the Office Action.

RESPONSE UNDER 37 C.F.R. § 1.116
U.S. Application No. 09/881,662
Attorney Docket No. Q64982

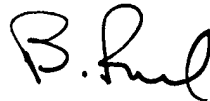
respectfully request that the Examiner acknowledge receipt of and indicate approval of the proposed correction to Fig. 12 in the next correspondence.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Billy Carter Raulerson
Registration No. 52,156

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE



23373

PATENT TRADEMARK OFFICE

Date: April 7, 2003